CLAIM REJECTIONS UNDER 35 U.S.C. 112, SECOND PARAGRAPH

Claims 1, 2, 4-18 and 20-32 were rejected as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention. Specifically, the Examiner has cited to the claim language within claims 1, 14 and 25 as being unclear whether the housing tube is positively recited as being part of the flexible source wire. The Applicant notes that each of claims 1, 14 and 25 explicitly recites "a flexible, hollow, elongated housing tube..." in the body of the claim. Because such is explicitly recited, it is a part of the flexible source wire.

With respect to claims 5-7, 16 and 26, the Applicant has amended the claims according to the Examiner's suggestions.

Reconsideration and withdrawal of the 35 USC 112 rejections is respectfully requested.

CLAIM REJECTIONS UNDER 35 USC 103(a)

Claims 1, 2, 4-18 and 20-32 have been rejected under 35 USC 103(a) as allegedly being obvious over U.S. Patent No. 5,282,781 to Liprie (hereinafter "Liprie") in combination with U.S. Patent No. 5,454,794 to Nariciso et al. (hereinafter "Nariciso") and U.S. Patent No. 5,230.348 to Ishibe et al. (hereinafter "Ishibe").

For the convenience of the Examiner and for use as a roadmap for understanding the Applicant's claimed invention, claim 1 is reproduced as follows:

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1. A flexible source wire for radiation treatment of diseases within a body comprising:

a flexible, hollow, elongated housing tube having a distal end and a proximal end, said housing tube constructed from a material exhibiting little or no memory retention when bent;

a flexible backbone wire having a proximal end, said proximal end of said wire being disposed in said housing tube, and further wherein the proximal end of said backbone wire is rounded; and

a radiation source or sources provided within said housing tube, said proximal end of said flexible backbone wire being adjacent to said radiation source or sources.

Applicants point to at least one pertinent limitation among the elements of claim 1 (and indeed, claim 14) to which the examiner has not given patentable weight. Specifically, the limitation of claim 1 that the *housing tube contain a flexible backbone wire having a proximal end, said proximal end of said wire being disposed in said housing tube, and further wherein the proximal end of said backbone wire is rounded, and a radioactive source... said proximal end of said flexible backbone wire being adjacent the radioactive source* is lacking in the prior art. Reference is made to the Applicant's specification for purpose of illustration, where the configuration of the rounded flexible backbone wire is discussed at paragraph [0019], and where the arrangement of the rounded flexible backbone wire with regard to the radioactive source is described at paragraph [0020].

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Neither Narciso nor Ishibe describe a housing tube containing a radioactive source and a flexible backbone wire having a rounded proximal end adjacent the radioactive source. Similarly, Lipric '781 does not teach a backbone wire having a rounded proximal end.

Lipric '781 does not teach a backbone wire having a rounded proximal end. In the Office Action dated February 1, 2002, the Examiner claims that because the source wire is crimped, the backbone wire, which is illustrated as being flat in the Figures, would "bulb" under pressure, thus creating a rounded end.

Other than the fact that this is a supposition on the Examiner's part rather than a teaching or description of the art, there are two problems with this reasoning. First, Lipric '781 teaches that the backbone wire should be composed of an extremely high tensile strength material. *Col. 9, lines 35-39.* Such material would be resistant to "bulbing" as described by the Examiner.

Secondly, Lipric '781 teaches that the backbone wire, radioactive core and plug should be closely abutting, such that they are tightly secured together by the force of the tube. *Col. 11, lines 14-18.* Indeed, the patent teaches that final drawdown of the tube onto the plug, core and backbone wire serves to eliminate virtually any remaining air spaces between confronting surfaces of components at the interior of the tube. *Col. 12, lines 10-20.*

Neither Narciso nor Ishibe describe a housing tube containing a radioactive source and a flexible backbone wire having a rounded proximal end adjacent the radioactive source. Narciso merely describes a steerable catheter including a deflecting

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wire. Ishibe merely describes a guide wire with an internal wire running the length thereof.

In the Office Action of February 1, 2002, the Examiner claims that Ishibe describes a bulb wire end at the distal end of the guide wire, the bulb effective to prevent piercing of the material of the distal end of the guide wire. The Examiner claims that such teaching is relevant to Liprie '781, and thus properly combinable with Liprie '781, since such a backbone wire would not promote flaking of the radioactive core. However, Liprie '781 actually teaches away from Ishibe's design. As noted above, Liprie requires a tight fit of internal components (a bulb end would not promote such a tight fit; flaking of the radioactive source in the manufactured wire is not a concern for the wire of '781) as well as a minimization of all internal air space within the housing tube (In addition to the reasons stated above, Liprie '781 states "A key aspect of the source wire fabricated according to the method of the present invention is that radioactivity emanating from the core will not seriously affect the interior surfaces or structure of the source wire, because the lack of air in the assembled unit will not allow undesirable reactions such as oxidation to take place." *Col. 12, lines 14-20*).

The Examiner's rejection of the claims is improper for any and all of the reasons above. Accordingly, all of the Examiner's rejections should be withdrawn. Because the Examiner has made only one rejection, and because the rejection is improper as stated above, the application should be passed to issue.

Claim 25 is reproduced below for the Examiner's convenience and for use as a roadmap for understanding the Applicant's claimed invention:

25. A flexible source wire for radiation treatment of diseases within a body comprising:

a flexible, hollow, elongated housing tube having a distal end and a proximal end, said housing tube constructed from a material exhibiting little or no memory retention when bent;

a flexible backbone wire having a proximal end, said proximal end of said wire inserted into said tube, and further wherein the proximal end of said backbone wire is rounded;

a capsule inserted into said proximal end of said flexible elongated housing tube;

a radiation source or sources inserted into said capsule; and

a plug which seals said proximal end of said housing tube.

Neither Narciso, Ishibe nor Liprie '781 describe a capsule containing a radioactive source and a flexible backbone wire having a rounded proximal end inserted in the housing tube such that the rounded proximal end of the backbone wire is adjacent the capsule.

Because the prior art references do not disclose the above required claim limitation, the proposed combination is improper in that it does not present a prima facie case of obviousness. Accordingly, the Applicant requests that the rejection be withdrawn. Reconsideration and allowance is requested.

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With respect to the additional rejection under 35 USC 103(a), U.S. Patent No. 5,163,896 to Suthanthiran et al. does not address the deficiencies of the above cited art.

The remainder of the claims depend from one of claims 1, 14 and 25. If an independent claim is non-obvious under 35 U.S.C. §103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988).

The dependent claims should be allowable for the same reasons as stated above for claims 1 and 22. Reconsideration and allowance of this application is respectfully requested.

If there are any fees with respect to this Response or otherwise, please charge Deposit Account 06-1130, maintained by the Applicant's attorneys.

Respectfully Submitted,

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APPENDIX I

A marked-up copy of the claims is attached hereto as Appendix I.

5. (Amended) The flexible source wire in accordance with claim 1, wherein said housing tube is constructed from [a material such as Nitinol or] a titanium/nickel alloy material.

6. (Amended) The flexible source wire in accordance with claim 2, wherein said housing tube is constructed from [a material such as Nitinol or] a titanium/nickel alloy material.

7. (Amended) The flexible source wire in accordance with claim 3, wherein said housing tube is constructed from [a material such as Nitinol or] a titanium/nickel alloy material.

16. (Amended) The flexible source wire in accordance with claim 14, wherein said housing tube is constructed from [a material such as Nitinol or] a titanium/nickel alloy material.

26. (Amended) The flexible source wire in accordance with claim 25, wherein said housing tube is constructed from [a material such as Nitinol or] a titanium/nickel alloy material.

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